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Maritime Law.

Circuit Court of Appeals, Second Circuit. Dec. 14, 1891.

1. Towage—Loss of Barge in Tow—Incompetence of Pilot.—A barge, while being towed through a channel with a hawser 100 fathoms long, sheered from the course of the tug, struck on submerged rocks, causing her to sink. The pilot of the tug was unfamiliar with the obstructions of the channel, and allowed the tug to go too far to westward of the safe course. Held, that the loss of the barge was properly found to be due to the negligence of the tug.
2. Same—Salvage—Remissness of Owner.—The owner of the barge gave the underwriters notice of abandonment, and that he should claim a total loss. They sent a contracting salvor to the wreck, who made an examination, to ascertain whether the barge could be raised or her cargo of coal recovered, and reported that the barge was not worth raising, and that the expense of recovering the coal would equal its value. Held, that the owner of the barge, in seeking to recover for her loss, was not chargeable with remissness, in making no attempt to raise the barge or save her cargo.
3. Same—Weakness of Lost Tow—Apportionment.—There having been no concealment of the weak condition of the barge in order to induce the towage contract, and her loss having been in no wise brought about by that condition, the fact that she was too rotten about the decks to admit of her being raised did not affect the owner's right to recover, nor was respondent entitled to an apportionment of the loss on the ground that, but for the weakness of the barge, the loss would have been comparatively small.
4. Same—Fraudulent Overvaluation—Costs.—A libellant who is entitled to recover for the loss of a barge through the negligence of a tug having her in tow, but who, being an expert, falsely testifies as to her value, and procures other witnesses to make statements as to her value which he knows to be incorrect, for the purpose of enhancing the amount of his recovery, should be required to pay the costs of a reference to ascertain such value.
44 Fed. Rep. 382, modified.

Circuit Court of Appeals, Second Circuit. Dec. 14, 1891.

1. Collision—Mutual Fault—Evidence.—A propeller sounded two blasts of her whistle to the ferry-boat, indicating her intention to cross the bows of the ferry-boat, as required by rule 1 of the supervising inspectors, and put her helm somewhat to the starboard, and, after running a short distance under her starboard helm, sounded two more blasts to the ferry-boat. The ferry-boat did not hear any of the signals of the propeller, the last of which was given when the vessels were about a quarter of a mile distant, and therefore did not respond to them as required by rule 2 of the inspectors, but at the same time with the last signal of the propeller, blew one blast, indicating her purpose to pass to the right of the propeller. Neither vessel changed her course after the giving of these signals, until too late to avoid a collision. Held, that the propriety of the course of the ferry-boat was to be determined by the rules of the navigation act, (Rev. St. U. S. § 4233,) and that having the propeller on her starboard side, and being entitled to keep her course as provided by rule 23, and the propeller being required by rule 19 to keep out of the way, the ferry-boat could not be held liable with the propeller for the collision that ensued, even if she had heard the signals of the propeller.
2. Same—Conflict of Local and Federal Navigation Rules.—The rule of the supervising inspectors governing navigation in New York harbor, that a steam vessel approaching another on a crossing course, so as to endanger collision, shall signify by a blast or blasts of the whistle what course she proposes to take, cannot be held to deprive a vessel having another on her starboard side of her right to keep on her course, as provided by rule 23 of the navigation act, (Rev. St. U. S. § 4233.)
3. Same—Reversing Engines—Evidence.—Rule 21 of the navigation act (Rev. St. U. S. § 4233) provides that every steam vessel approaching another so as to involve risk of collision shall slacken her speed, and, if necessary, reverse her engines. After the propeller signalled her intention to cross the bows of the ferry-boat, there was an interval of 30 seconds, during which the ferry-boat had a right to expect that the propeller would make the proper movement to avoid collision, by altering her course to starboard, in which case it would have been as dangerous to reverse as to go forward. Held, that the ferry-boat was not at fault for not

reversing her engines until it was clear that the propeller did not intend to alter her course.

THE learned district judge, from whose decision this appeal is brought, thought the first signal from the propeller was given when the two vessels were somewhat further apart than we find them to have been. He found both vessels in fault, and decreed a division of the loss; holding the propeller in fault for undertaking to go to the left, or across the bows of the ferry-boat, instead of to the right, or under her stern, as required by the rules of the supervising inspectors; and holding the ferry-boat in fault for not answering the first signal given by the propeller, or giving any timely signal herself to the propeller to denote her own intentions, as required by rules 1 and 2 of the inspectors. As we understand the rules of the supervising inspectors, they mean to require steamers at all times, when passing or meeting at a distance within a half mile of one another, to give and answer signals by blasts of the steam-whistle to indicate what course they propose to take; and the signal which indicates a purpose to pass to the right of the other is one blast, and that which indicates a purpose to pass to the left of the other is two blasts; and, when the rules say the other steamer shall promptly answer a signal, they mean that the answer shall be one which indicates her proposed course. Rule 1 prescribes that the answering steamer "shall answer promptly by a similar blast of the steam-whistle." If this means that she must give a response indicating that she will conform her movements to the proposed course of the other, we think the rule transcends the authority of the inspectors. We do not mean to be understood that the inspectors may not lawfully require a steamer to give a signal to another indicating that she observes her, and proposes to perform her duty properly in passing or meeting; but the inspectors cannot lawfully require the other steamer to assent from a departure from the statute in cases covered by the rules of navigation as enacted by congress, and the inspector's rules are not to be construed as meaning to do so. When vessels are meeting head on, or nearly so, they are under an imperative obligation to pass to the right, by the law of congress, unless some special circumstances justify a departure pursuant to rule 24; and neither can be obliged to depart from the statute at the request of the other. So, when two steam vessels are crossing so as to involve risk of collision, the vessel which has the other on her starboard side must keep out of the way, and the other must keep her course, unless a departure is necessary pursuant to rule 24; and the vessel which is required to keep her course cannot be compelled to depart from it at the instance of the other. The rules of navigation enacted by congress are obligatory upon vessels approaching each other from the time necessity for caution begins, and from that time, as the vessels advance, so long as the means and opportunity to avoid danger of collision remain. Until the necessity for precaution begins, obviously there can be no fault on the part of either vessel—rules of the inspectors to the contrary, notwithstanding, of which the other can justly complain. If a proposition is given proposing a departure by one vessel, and is consented to by the other vessel, undoubtedly the former is justified in assuming that the other understands that a departure is to be attempted, and will govern herself accordingly.

Inasmuch as the ferry-boat knew that the propeller proposed to cross her bows, and that unless he after changed that purpose the situation involved risk of collision, the question arises whether the ferry-boat should not have stopped and backed, in obedience to the requirements of rule 21. As the vessels were nearing each other at a speed of 2,500 feet a minute, there was but little if

any more than 30 seconds between safety and collision after the second signal of the propeller. But there was still an interval, during which the ferry-boat had a right to expect that the propeller would make the proper maneuver to avoid her; and, as she could not know that the propeller would not alter her course to starboard, it would have been as perilous for the ferry-boat to stop and back as to proceed. We think that she properly delayed stopping and backing until it became obvious that the propeller was not going to clear her; and, in the short intervening distance, this was not obvious until the propeller gave the alarm signals, and then the ferry-boat did all that she could. The case is one for the application of the rule that a vessel which is primarily in fault for a collision cannot shift its consequences in part upon the other vessel, without clear proof of the contributing negligence or fault of the latter. Her own negligence sufficiently accounts for the disaster. The Comet, 9 Blatchf. 323. There should be a reversal, and a decree dismissing the libel, with costs of the district court and of this appeal to be paid by the libellants. The cause is remanded, with instructions accordingly. Fed. Rep. Vol. 49.

LAKE SHIP-BUILDING.

Nearly \$6,000,000 up to date marks the investments for this season in new lake-built tonnage, chiefly steam. The largest steamer building is for the Eddy Transportation Co. of Bay City, Mich., and the Detroit Dry Dock Co. have this contract now well along. She will be 362½ feet in length, and carry 4,000 tons on a sixteen feet draft. The above figures are sufficient for builders to judge of the co-efficient of fineness in the lines of such a carrier. Her cost is to be \$225,000. The Chicago Shipbuilding Co. Colehour, Ill., a suburb of Chicago, will launch the handsome steel steamer Mariposa in about two weeks. Her hull dimensions are 250 feet, 45 feet, and 24 feet; to cost, \$240,000, and to be fitted with all modern facilities for handling ship and cargo. Without cessation, ten whalebacks are to be launched, and the first of this fleet will load grain next week, as at Superior, Wis., it is the custom to load a whaleback within a day or two after she is launched; 320 feet in length is the scale on which this last batch of lake freight carriers are being constructed. At the yards of F. W. Wheeler & Co. four steel lightships for the Light-house Board are being constructed for coast service. The Globe Iron Works Co. have nearly completed two light-house tenders for the ocean service, and the Lighthouse Board have just accepted the tender Amaranth, built by the Cleveland Shipbuilding Co. for lake service.

Building is brisk at Superior, Bay City, Chicago. Detroit, Wyandotte, Toledo, Cleveland and Buffalo.

RETALIATORY MEASURES.

Private advices from Washington state that the several interests at work to obtain the deepening of the great lake channels and deep water navigation from Duluth to the sea coast, indicate that there is a strong probability that retaliatory measures will be taken against Canada, because of the imposition of tolls on American vessels passing the Welland and St. Lawrence canals. When this spring the Canadian government reimposed tolls on American vessels passing these canals the attention of Secretary Blaine was brought to the matter, and retaliatory measures by charging toll on all Canadian vessels passing the great Sault canal into Lake Superior were proposed. Secretary Blaine was at once interested in the matter, and after a number of conferences he came to the conclusion at once to take steps toward a system of tolls. In a few days, it is said, the matter will probably be made public from Washington.

(ORGANIZED 1880.)

CLEVELAND VESSEL OWNERS' ASSOCIATION.

(Membership 1892.)

One hundred and sixty-three steamers, and } Aggregating 298,127 tons.
 One hundred and forty-four sail and barge, }
 Maintains shipping offices at Cleveland, Ashtabula Harbor, Fairport and
 Toledo. Regulates wages, protects crews and takes cognizance of all matters
 in the interest of the members and of the lake commerce generally.

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THE MARINE RECORD.—Official Paper.

CLEVELAND, O.

F. & H. Born, range manufacturers, have received the order for supplying ranges to the Choctaw, the second freight monitor built by the Cleveland Ship Building Co. The Andaste, the first monitor, was also fitted with the Born range.

A. T. Van Tassel & Co. seem to hold the preference in steamboat plumbing work at this port, and have men constantly busy at both the Globe Iron Works shipyard and the Cleveland Ship Building Co.

Our energetic townsman, Mr. John Thomson, River St., is placing his heating apparatus in a number of fine residences, and according to the manager of a line of steamers his pipe fitting work on steamers cannot be surpassed.

Commodore George W. Gardner is eminently in the right when he advocates a training ship for this port for orphan boys and others who are destitute of proper handling. An old revenue cutter or other Government vessel such as the Bibb, Michigan, or Andy Johnson ought to be placed at the disposal of the State of Ohio, or perhaps more properly speaking of the port of Cleveland, so that waifs might be transformed into energetic and honorable citizens. The ex-Mayor ought also to entertain the State Naval Reserve Bill with more vigor than any other local authority on such matters.

At a meeting of the finance committee of the Lake Carriers' Association held in Capt. Corrigan's office last Friday, the keepers of private lights from Bar Point to Point Edwards were voted the balance of their pay for last year's services and the same necessary aids ordered continued for the present season. A large quantity of tonnage is being added to the charter list, and all interests will now be centered in the management of one association, which, from the present outlook, is destined to become the most representative shipping organization of the United States.

The schooner David Stewart after being on the beach near this port all last winter was successfully released by Baker Bros., and is now being repaired here. The survey shows damages to the amount of \$4,060, but the vessel still looks well and will be a staunch craft after being overhauled. Capt. C. E. Benham represented the underwriters on the survey, and Capt. James M. Jones, of Detroit the owner, J. W. Squires.

The steel steamer German, is in dry dock, with rather extensive bottom damage; 29 plates will be taken off and re-rolled, and the damaged frames replaced. John Smith, of the Globe Iron Works Co., says he will have her as good as new again in eight days. By this estimate she will be ready for work in about six days, as bottom damage is always handled in a prompt and first-class shape by Mr. Smith.

Shipping master Rumsey sent out invitations to the marine press to a fish dinner at the vessel owners' shipping office on Friday last. As usual, the affair was well attended, and those present heartily enjoyed the repast placed before them. The irrepressible professor was to the fore as usual in the after-dinner effusions.

At the yards of the Globe Iron Works Co. the second lighthouse tender is nearly ready for launching and will likely be put in the water on the 14th, she is to be stationed at Portland, Ore., and will be navigated through the Straits of Magellan to reach there. The large steel steamer Mariposa, building to the order of the Minnesota Steamship Co., dimensions 348, 45 and 24½ feet is well along towards completion, her handsome engines now put together at the erecting shop of the company is a "Globe" triple expansion, cylinders 24, 39 and 63 by 48 inch stroke for 175 pounds steam, working pressure, and she will have three Scotch type boilers 12 by 12 feet. The new Anchor Line steamer Schuykill numbered 49 by the builders is also well along, and the handsome yacht Comanche the most complete fitted and furnished tonnage on the lakes will be ready for the owner's use next month.

The local station of the weather bureau was removed last Saturday from the Wilshire block to the Western

Reserve building where it now occupies the finest exposure and best site which the city could offer. Forecast official Stockman will shortly visit Washington for a few months to take up a special study on local forecasts over extensive territory.

Private lights are again lit in Detroit River and lake vessel owners are going down into their pockets to pay for carrying on the commerce of the great north-west.

Water in the St. Clair River is reported lower than for many years, and the utmost caution is found necessary with the deep draft vessels.

At the yards of the Cleveland Ship Building Co. the freight monitor Andaste is nearly ready for business and expects to leave port on the 15th, Capt. J. A. Miner last season in the E. C. Pope is in charge, Chief Engineer Joseph Hayes and Chief Mate Edward Ellis, the second monitor named the Choctaw will launched about the 14th. The steel steamer Spokane of the Wilson Line has been successfully lengthened and received new steel decks, forward house and other new work, she will also be ready for business in about ten days, the work done on her represents a most skillful contract in the art of modern shipbuilding.

Clough, Witt & Co. are building a small single engine, cylinders 10 by 12 for a new yacht building by Gerlach Bros. at Rocky River.

The Chase Machine Co. are doing a very favorable trade in pumps and other specialties which the firm manufacture.

The coal shovelers' strike at this port is already being felt in shipping circles, 15 cents a ton is wanted for shoveling, though it is now thought that a compromise on 14 cents could be made with the men, fueling as well as cargoes is affected by the strike, and steamers get out of port as well as they can, but cargoes are not worked at all. The shovelers are quiet and orderly, but firm, and say they will not work this summer for 12 cents. Two fueling companies are willing to pay the rates asked, but the shippers hold out.

Messrs. Bassett, Presley & Train, the well-known iron and steel warehouse men of this city, have enjoyed a brisk season's business; sales up to the first of May exceeding those of any previous year. Iron work, such as frames, bolts and spikes for vessel work, is a specialty with this firm and for many years almost the exclusive lake patronage has been in the hands of this business-like and extensive house.

Captain Alfred Mitchell has become a member of the firm of Mitchell & Co., vessel owners, brokers and insurance agents. The captain will bring his family to this port and take up a permanent residence here.

A better feeling now exists in vessel owning circles, and an upward tendency is expected to develop during the next few days in freights. Three and a-half cents on grain is quoted from Duluth up to the 15th, and both ore and grain rates are getting firmer.

The steam barge Schnoor, chartered with coal, yesterday, Huron, O., to Port Huron, at 35 cents, and the Scotia, Ashtabula, to Escanaba, at 40 cents, for Escanaba ore, a rate of 75 cents is not quoted, and a quantity of tonnage will no doubt be placed at that figure.

Captain George Mallory has been detailed from the work of superintending the construction of the new steamer building for his owners at the yards of the Globe Iron Works, to take around a large new fuel lighter to Erie. The tug Alva B. will do the towing, and the lighter, which was built this winter at the yards of the Cleveland Dry Dock Co. to the order of Pickands, Mather & Co., will remain for the season at Erie, Pa.

The River Machine & Boiler Works are among the busy and prosperous marine works of this city. It has been found necessary during the greater part of the winter and up to the present, to work overtime so that the orders on hand might be promptly filled on time. The compact hoisting engines, of which the firm make a specialty, seem to fill the bill for vessel use to perfection, and orders are both wide-spread and numerous for their deck hoisting engines.

KINGSTON, ONT.

Special Correspondence to The Marine Record.

Quite a big commotion was raised in marine circles this week by the receipt of information from the Department of Railways and Canals, that the Cornwall canal would not open as soon as the rest of the St. Lawrence canals. The first steamships were ready to take in grain at Montreal on Saturday, but notice was given that the water would not be let in the Cornwall canal until Monday. As only the ordinary repairs had been done to this canal this spring, the trade could not understand why this delay should occur, and as the forwarding companies had sixteen barges with over 300,000 bushels of grain waiting at Dickenson's landing for the canal to open, the Boards of Trade of both Kingston and Montreal petitioned the government asking that this canal be opened at the earliest possible moment, and the Department of Canals ordered that this be done at once.

The steamer Chieftain, of the Calvin Co., met with an

accident by the breaking of a steam pipe this week which will delay her for three days.

The Seguin and Ogarita are in from Chicago with 78,000 bushels of wheat, the Topeka with corn from the same port, and the Niagara with wheat from Toledo.

The steamer Ocean was in port on Friday for the first time this season, looking as well as paint and bunting could make her. Capt. Towers is still in command with Mr. Robert Black at the throttle, and in fact the only change in her officers this year is the appointment of Mr. J. Malcolmson to the purser-ship. During the evening Capt. Towers treated some of his friends in grand style in the ship's saloon. Mr. James Wilson has been appointed to the position of dock-master at the new dock. Capt. Skillen, of the Deseronto, has been ill this week and Capt. D. B. Christie is taking his place on that steamer.

Much sympathy is felt for Capt. Potenaude, of the steamer Celtic for the loss of his position through the collision with the propeller Russia, near Rondeau, Lake Erie, on Sunday night. Capt. Potenaude fitted the steamer out at Hamilton, but had to leave her in the Welland canal and return to Kingston owing to the illness of his wife, and Capt. John Clifford took his place. As soon as Mrs. Potenaude was past danger her husband wired his owners that he was ready to return to duty, and was ordered by them to meet the Celtic at Port Colborne, which port she expected to pass on Monday, with cargo from Toledo bound to Montreal. Edward Taylor, of this city, was engineer of the Celtic. The Celtic was one of the best of the old Welland canal size propellers built by Robertson, of Hamilton, in 1874, valued at \$16,000, and owned by A. E. D. Mackay's sons of that port.

The propeller Haskell ran into the schooner W. T. Greenwood in Oswego Harbor, and took 17 stanchions, rail and stringers. The propeller footed the bill.

The barge Toledo was launched from the M. T. Co.'s shipyard late on Saturday night.

The Cibola, of the Niagara Navigation Co., is now on the dry dock here having her bottom scraped and painted.

Mr. Alva Solmes, acting for the Department of Marine has placed all the buoys in position to mark the channel in the Bay of Quinte from Casey's Point to Messenger Point. The buoys are in 12 feet of water on the edge of the bank.

The Rathbun Co.'s wharf and storehouses at Belleville were burned on Sunday night with all their contents in the latter, consisting of 1,000 tons of coal, a lot of lumber and several horses. The steamer Hero and schooner Anna Minnes, laying at the dock, had a narrow escape from catching fire. Loss \$20,000, partly covered by insurance.

MAGNET.

BUFFALO, N. Y.

Special Correspondence to The Marine Record.

A very large fleet came in Monday and Tuesday, and the grain receipts for those two days foot up about 1,500,000 bushels.

A better coal movement is expected next week, but so far there is little encouragement for vessel-owners outside the Lines. The shipments for April exceed those of a year ago by over 20,000 tons. Rates remain firm at 40 cents for Milwaukee and Chicago, and 25 cents for Toledo and Detroit. Lake Superior rates are rather weak at 30 cents to Duluth and Superior, and but few charters outside of line steamers have been made.

There was such a dense fog over the river and harbor that several boats got out of their course and movements about the harbor were rather risky. The tug Genevieve was four hours on a reef in the river just below the harbor, and the steamer Glodstone got ashore on Windmill Point, but was pulled off by tugs. There were several narrow escapes from harbor collisions.

The new tug Tam O'Shanter left, Tuesday, for Sault Ste. Marie. She is a smart little craft.

Smith & Davis had insurance on the Russia to the amount of \$66,000. This was the Russia's first trip of the season, as, after flitting out, she was laid up again, and the Cuba was chartered and made a trip in her stead.

The Erie canal was opened Saturday night at midnight. Superintendent Chambers says unusual steps were necessary to get the canal in shape by the time set for opening. Quite a fleet of boats got away, but it cannot be said that the prospects for a busy season are very good, as the railroads will undoubtedly let rates down as low as last season, and the canal boatmen are opening rather high at 4 cents on wheat to New York.

The side-wheel steamer William Harrison is expected here from the coast in a few days, and the Gazelle, from Detroit, will also come down shortly.

If power has anything to do with the speed of the Columbia, she will turn up pretty lively. She will register something over 300 tons net; her boiler is 9 feet by 16, and weight 22 tons. The boiler of the Susan E. Peck, a freighter of over 1,300 tons, is larger only by six inches in diameter.

Last Friday, as the barge Troy, in tow of a Tonawanda tug, was coming up Niagara river, the tug's machinery

gave out and the barge went hard on a reef near the Inlet Pier. The captain of the Troy refused help from Buffalo tugs saying that the Tonawanda tugmen had gotten him into trouble and would have to get him out. The disabled tug was picked up by the tug International.

Sloan & Cowles have made the following appointments on their steamers: Pilgrim, Arthur G. Gilbert, master; Augustus Dilliot, engineer. Oclemena, John O'Brien master; William Bradley, engineer. Vision, Wright Taxter, master; B. Whittaker, engineer. A. H. Sloan, George Robinson, master; William Kramer, engineer.

It took five tugs to pull the Columbia out of the mud in the slip into which she was launched. Mr. Murphy intends to build another steamer next winter, and he will probably select some spot with better water near by.

PARKE.

BAY CITY SHIPBUILDING.

Special Correspondence to The Marine Record.

BAY CITY, MICH.—Capt. James Davidson has been elected one of the board of managers of the new Lake Carriers' Association.

The steambarge D. Leuty and tow made the first round trip to Buffalo and return.

The steamer Ossifrage that was taken out and lengthened 30 feet at Wheeler & Co.'s has been re-launched. The tug Ramage which has been given a rebuild at the same yard, has also been launched. Her name will be changed, and she will hereafter be known as the Charles Smith.

The schooner Montana, owned by Mitchell Barkell, of this port, and which has lain on the bottom of the river all winter has been raised to allow her to be taken up the river, and the ore of which there are about 400 tons taken out when she will be taken back to the dry dock for a rebuild.

At James Davidson's yard three large steamships and two schooners are being built. The former are known as Nos. 48, 49 and 50, and are exactly alike, being 330 feet over all, 45 feet beam and 26 feet deep. Nos. 48 and 49 are rapidly nearing completion. Two boilers each 14 feet long by 11½ feet in diameter are being placed in position in No. 49. They were built by the Cleveland Ship Building Co. The frames of No. 50 are all up and the inside sheathing on. They will cost about \$150,000 each. The frame of one schooner is nearly all up, and the keel of the other is being laid to-day. All these boats are for the Davidson Transportation Co. J. P. R.

CHICAGO, ILLS.

Special Telegram to The Marine Record.

The Beck steam steerer on the Independent Tug Co.'s tug Ira O. Smith was given a first trial last Friday afternoon, and was pronounced a complete success.

Captain Thomas Nelson, formerly mate on the steambarge Charles Rietz, has been appointed master of the schooner Agnes L. Potter.

C. A. Barker, lumber merchant, has purchased the tug Mary McLain, of the Chicago Towing Company. She will go to Traverse City for towing purposes. Captain A. Cleghorn will command her.

The L. M. and L. S. T. Co.'s steamer, City of Traverse, left here Sunday, and the Peerless, Wednesday, for Lake Superior, on their first trips this season. They both took full loads of merchandise and a number of passengers.

Captain Kirtland, the well known wrecking master of former years, is now commander of the Goodrich Transportation Co.'s side wheel steamer Muskegon.

The O. T. Co.'s steamer, William J. Averill, was in dock last week for a new fore foot and re-caulking.

Captain John A. Keeling, aged 47 years, died at his late residence, 4111 West Washington street, Chicago, Tuesday night, April 26th. Captain Keeling's last command was the schooner Resumption, of the Ford River Lumber Co.'s fleet, which he brought out and sailed for 12 years.

TORONTO, ONT.

Special Correspondence to The Marine Record.

The steamer Rosedale, Captain James Ewart, left for Port Arthur on Saturday to load wheat for Kingston. The new propeller being built by Captain J. B. Fairgrieve at Hamilton will be called the Arabian. She is to be launched the 1st of June and will be ready for business about the middle of July. Melancthon Simpson, the well known shipbuilder, is superintending the construction of the wood work of the vessel and his name is a guarantee of excellent construction. Captain Henry Chestnut will sail the Arabian. She will trade between Montreal and Duluth.

The schooner Sir C. T. Van Straubenzie loaded lumber for Oswego. Schooners Emerald, J. G. Worts, Denmark and Norway loaded square timber for Garden Island. Schooner Fabiola cleared with 10,000 bushels barley for Kingston. The schooners Lady Macdonald, Clara Youell, Greenwood, Laura, S. J. Collier and Dundee arrived with coal.

Mr. E. Smily has been appointed purser of the steamer Campana.

The steamer Macassa, of the Hamilton Steamboat Co., made

her first appearance this season in port on Saturday last. She is looking in first-class trim this season, having received a thorough outfit everything about her is as neat and clean as paint and varnish can make it. She will make daily trips until the 1st of June; after that date making double trips. Her officers for this season are: Captain, A. W. Crawford; mate, Jno. W. Maddock; 1st engineer Wm. Noonan, and purser, M. Arthur. Mr. Fergus Armstrong, popularly known as Fergie, will again act as Toronto agent of this company and will no doubt secure a large proportion of the freight and passenger business of the port. The steamer Modjeska, of this line, will not commence her trips until about the 15th of June.

Captain John O'Brien, of Brooklyn, N. Y., U. S. special steamboat inspector, arrived in the city on Friday. He had been at Port Dalhousie, where he inspected the propeller Acadia, and during his stay here he inspected the steamers Cibola, Chicora and Oungara, of the Niagara Navigation Co.'s fleet. He left on Sunday night for Montreal, where he will inspect the propellers Cuba and Alma Munro.

The steamer Cibola moved from her winter moorings to Geddes Dock on Saturday to take on fuel and left the same night for Kingston, where she will go on the government dry dock to have her hull scraped and painted, and generally overhauled, preparatory to commencing her season's business on the Lewiston, Niagara and Toronto route. Captain John McGiffen has got the Cibola looking in elegant trim this season and she will undoubtedly be one of the prime favorites for Toronto's excursionists and traveling public.

The propeller Ocean arrived in port on Thursday last from Hamilton on her first trip to Montreal. She had a profusion of bunting flying and made quite a gay appearance. Her cabin and staterooms have received a thorough renovating in anticipation of a large passenger business, and her hull also has not been neglected, but everything has been done to put her in first-class shape throughout. Her managing owner, Mr. W. A. Geddes, had invited quite a number of ladies and gentlemen to a sail on the lake on Thursday afternoon. A large number responded to the invitation and in spite of a strong wind and cloudy sky a very pleasant time was spent. The steamer left the wharf at 3 o'clock and went as far as the Exhibition grounds, and returning steamed around the bay for about an hour; refreshments were served on board and everyone present expressed themselves as being delighted with the trip and the appointments of the steamer. She left for Montreal on Thursday night with a full load of merchandise and a number of passengers. The officers of the Ocean are: Captain, J. T. Towers, 1st mate, T. Toupin, 1st engineer, R. J. Black; 2d engineer, Robert Lloyd, and purser, John Malcolmson.

Mr. Frank Polson, of the Polson Iron Works Co., was in Ottawa on Saturday on business in connection with the Marine Department. The cruiser Curlew will be launched at Owen Sound on May 23d.

At a meeting of the Royal Canadian Yacht Club held last Saturday night the following officers were elected for the year: Commodore, A. R. Boswell; vice-commodore, T. G. Blackstock; rear-commodore, C. A. B. Brown; honorable secretary, S. Bruce-Harman. The present year promises to be an unusually bright one for the club, many applications for membership having been received.

Mr. J. H. Morley, late passenger agent of the C. N. W. Ry., has been appointed to the position of general passenger agent of the Richelieu and Ontario Navigation Co., with headquarters at Montreal. On Saturday night a complimentary banquet was tendered him at the Albany Club by the railway and steamship agents, when a very enjoyable time was spent and he was wished good luck in his new sphere of work.

Mr. R. O. Mackay, of Hamilton, was in the city on Monday and on his arrival received a telegram from Hamilton, stating that a message had been received from Captain John Clifford that the propeller Celtic had been sunk off Rondeau during a dense fog in collision with the propeller Russia, of Buffalo, and that the cook, Margaret Strachan, of St. Catharines, had been drowned. The message was sent from Ridgetown, and the crew were on their way to Hamilton. Later despatches state that after taking off the Celtic's crew the Russia had to be run for the shore, and was beached one mile east of Rondeau Piers. The Celtic was owned by Mackay's Sons, of Hamilton; was built in 1874 by Arch Robertson, classed A 2 and valued at \$16,000. She was insured for \$12,500 in the Aetna Insurance Co., placed through the general agent at Chicago. She was bound from Toledo to Montreal, loaded with 17,000 bushels corn, consigned to D. G. Thomson. Captain John Clifford, of the steamer Lake Michigan, was in charge of her this trip, as Captain Oliver Patenaude had been compelled to leave her before she left Hamilton on account of the serious illness of his wife at Kingston. The other officers of the lost steamer are: 1st mate, Louis Lefsaivre; 1st engineer, Edward Taylor; purser, James Fitzgerald.

On the 2d inst., there was launched at Collingwood a very powerful tug built by the Collingwood Dry Dock Company from designs by Mr. S. D. Anderson, superintendent of the dock. She is called the Reliance and is owned by the Emery Lumber Co., of Midland, her dimensions being 130 feet long, 24 feet beam and 11½ feet deep. She will be sailed by Captain F. Burke.

SPARTA.

DULUTH, MINN.

Special Correspondence to The Marine Record.

DULUTH, MINN.—After several days of waiting in the ice off Duluth about 50 vessels arrived here in a bunch last Thursday and the coal docks and elevators have suffered. Shipments for the week have averaged over 500,000 bushels daily, and for the entire week have been 3,100,000 bushels. In the same time receipts have been large, reaching a total of 900,000 bushels. The month of April just past leads any April in the history of the port, with receipts and shipments of breadstuffs, as follows: Received, flour, 92,052 lbs., wheat, 4,607,497 bush.; flax, 26,415 bush; shipped flour, 84,766 bbls.; wheat, 3,669,844 bush.; flax, 110,880 bush. Produced flour, 63,992 bbls. There is in store here now 13,000,000 bushels wheat and 250,000 bbls. flour, against wheat a year ago of 5,065,000 bushels.

The present week bids fair to beat the spring record again in shipments, as the elevators, as well as the coal docks, are crowded with vessels. In fact, there never has been a time when Duluth and Superior harbor has shown such a fleet of fine lake carriers. To add to the big fleet thirty vessels arrived Sunday. At the docks of the Lehigh and Ohio companies there are veritable blockades, boats lying at the Ohio four deep. The company is pushing the extension of its dock, but will hardly be able to have it ready for several months.

Inman's new tug, the Joe Dudley, arrived a day or two ago from Port Huron, and is in service. This gives him a fleet of ten serviceable and excellent harbor tugs, most of them of a character hard to beat for their particular work. He is fitting up his large wrecking pump and outfit, and as soon as the spring rush is over, will fit out three tugs with fire pumps under a contract with the city, to be used as fire boats.

The H. R. Dixon, Booth & Sons' company's vessel returned last week from Manitowoc, where she had a rebuild. She is 33 feet larger than last year, and has ten double staterooms added. Other improvements have been made, but her power remains as before. She will make the Isle Royale-Port Arthur run as heretofore. The A. B. Taylor, belonging to the Isle Royale Sound Corporation, and used last year by the Wendigo Copper Co., of the Island, is lying here, having been sold. It is understood that the Copper company has given up the search for metal, and will abandon Isle Royale to Booth's fishermen and the occasional transit from Duluth. It is probable, if this is true, that it will be a long time before Isle Royale is again the scene of mining operations.

The Thomas Wilson, 119 by builders' number, was launched Saturday at the Steel Barge Yard. It is the first of the spring launches. The vessel is 322 feet over all, 24 deep, 42 beam. She should carry, on a good draught, 4,000 tons; but the latest Sault advice is that there is only 13.3 feet of water. The Wilson will load wheat this week. Six more boats are on the stocks in the yards, more or less, near completion. The Pathfinder, Samuel Mather's new whaleback steamer, will be out soon. She is 340 feet over all. The Sagamore, her consort, is the size of the Wilson. The six boats now on the stocks at the McDougall yards, are: two for the Soo road, two for Mathers et al., and two on yard account. Two more on yard account are to be started at once.

The whaleback fleet has something like 2,500,000 bushels of wheat charters booked; about half of the wheat is now chartered ahead. Rates now are brisk at about three and a-half cents, though not a great amount of tonnage is being taken.

ESCANABA, MICH.

Special Correspondence to The Marine Record.

Capt. S. B. Grummond's big side wheeler Atlantic is due here about May 3rd on her maiden Green Bay trip down. She will make three round trips each month between Green Bay and Cleveland, stopping at intermediate ports.

Hannah, Lay & Co.'s Line steamer City of Grand Rapids will be put on the Traverse City and Manistique route instead of here. She will leave the east shore at 8 p. m. Mondays, Wednesdays and Fridays, returning on alternate days.

The annual election of officers of the Escanaba Lumber Loaders Union, which has just been incorporated, was held last week. The following were chosen for the year next ensuing: Thomas Robilliard, president; John Roddy, secretary; Peter Hoffman, treasurer; William Gallagher, dock boss. An executive committee of three were appointed as follows: William Gallagher, William Godfrey and John Foster. Regular meetings will be held on the first Monday of each month.

We fail to hear anything of the Sailor's or Seamen's Union at this port so far this season.

The Canadian steamer Orion and consort Muskoka are taking in a cargo of square timber for shipbuilding. They carry it to Collins Bay, where it is rafted for the trip down the St. Lawrence, thence across the big pond. It is said that the Orion has on board a few sticks of timber from "other feller's" land, and for which the other fellow has not received pay, consequently the whole outfit is "tied up."

Escanaba with a little enterprise and necessary capital could construct the modern carrier in close competition with the ports for which she now furnishes the structural material.

The steamer German, of the Menominee Line, got off with the assistance of the tugs Monarch and Favorite last Monday, arriving here late. She loaded and left for Ashtabula apparently uninjured and only slightly leaking.

Capt. O. B. Green, of the steel steamship Griffin; Capt. S. Murphy, of the Saxon, and Capt. P. H. Smith, of the Sheldon, were among our pleasant callers this week. Bon voyage, gentlemen.

UNO.

MARINE CITY, MICH.

Special Correspondence to The Marine Record.

The new barge which J. H. Ihnken, of this city, has been superintending the work of building at A. Smith & Sons' shipyard, at Algonac, during the past winter, was successfully launched last week. The Smith is 152 feet long over all, 30 feet beam and 11 feet in hold. She has four hatches and two spars, and is very substantially constructed. The boat is owned by Hon. Abram Smith, of Algonac, and A. W. Comstock of Alpena, and will go into the lumber trade, towing behind the steam barge Porter Chamberlain. Her carrying capacity is estimated at about 600,000 feet of lumber. The Abram Smith is a handsome little barge, and will be sailed by Capt. G. B. Fuller of Alpena.

ENGINEER REDWAY TALKS.

Special Correspondence to The Marine Record.

TORONTO, ONT.—I have interviewed Marine Architect Redway, of the Doty shipyard here, relative to the report that there was a misunderstanding existing on the whaleback principle Mr. Redway says:

Sir: There is no truth in the report that Capt. Alex. McDougall has threatened the John Doty Engine Co., with an action for damages for infringement of his patent rights in whaleback designs. The Doty Co. have not yet commenced building any whalebacks, and when they do, the type of vessel they contemplate is one designed by me to obviate the defects which I anticipated and foretold in Capt. McDougall's design, some of which have been recently demonstrated by the C. H. Wetmore in a gale on the Pacific Coast, viz: loss of her rudder on one occasion, and severe injury to the bow on another. Capt. McDougall's patent rights for Canada expire in July next, unless he builds a whaleback of his design on the Canadian side before that date; and there is scarcely time to do so now with existing facilities. In any event the dissimilarity is so marked between his design and my own that it would puzzle the elastic imagination of even our friends across the line to reconcile the difference and show them to be one and the same. It is true we start from the same first principle, viz: how to carry the largest cargo at the cheapest rate and fastest speed with safety upon a limited draught of water. Capt. McDougall's method for solving the problem is by means of an almost submerged steel tube with pointed ends; and it must be admitted that he has achieved a great measure of success. My idea is that the science of submarine navigation has not as yet become any more a commercial reality than has aerial navigation, for, while both are theoretically possible, neither has yet, nor is likely in the immediate future, to become sufficiently practicable to command universal adoption. I do not believe that our freight or passenger vessels will ever become general which have not at least sufficient surplus buoyancy to keep their heads above water. Capt. McDougall has pointed out and followed a new departure in marine construction, and has taught the shipping community some valuable lessons. For the principles involved therein he is entitled to all the credit and profit due to the importance of his invention, but finally has not been reached in naval architecture any more than in any other science. With regard to the new monitor whaleback steamer which is to be built for the Canadian Steel Barge Co., (through Mr. Thomas Marks of Port Arthur) from my design, preliminary negotiations have been concluded satisfactorily, but it is hardly likely that the contract will be signed until after July next, when, if concluded, Toronto will have an addition to her waterside industries of one requiring a large number of workmen.

Mr. C. H. Tupper, Canadian Minister of Marine, has succeeded with his bill to amend the steamboat inspection act so that it will give the governor-in-council power to make regulations regarding life boats and buckets on steamboats. A clause was added to the bill before it was reported from committee to the whole House for final action, providing that engineers who are required to have certificates of competency shall keep these posted in a conspicuous place in the engine room of the vessel. Formerly the Steamboat Inspection Act specified that ships' life-boats must be made of metal; some inspectors found this out and began to harass vessels by its strict enforcement, hence the Minister of Marine's action. The clause restricting construction of vessel buckets and fire appliances to metal and leather was retained, as the government's nautical advisors said that these materials were best because wood was liable to get out of repairs.

Mr. Tupper's bill respecting fishing vessels of the United States which empowers Governor-in-Council to continue the *modus vivendi* from year to year without asking Parliament's permission, has been reported to the House and will shortly become law. The idea is to have the matter arranged for American fishing vessels to know early in the season whether licenses to fish in certain Canadian waters shall be issued so that boats may not be delayed in fitting out. Newfoundland licenses therefore, are issued to United States fishing boats free while the Newfoundland Government does not allow Canadian vessels to enjoy the same. The clause of Mr. Tupper's bill recognizing Newfoundland fishing licenses as valid in Canadian ports was eliminated at the suggestion of Mr. Laurier, leader of opposition.

YEARLY TIDES.

At a recent meeting of the Engineers' Club of Philadelphia, Mr. W. S. Auchincloss read a paper on yearly tides. The author stated that he proposed to show that confined bodies of fresh water are subject to yearly tides of greater or less magnitude, depending upon the nature of the basin or upon the strata to which they are confined, and upon the effect of evaporation if in an open basin.

In March, 1885, we had occasion to sink a well near Bryn Mawr, Pa. Natural anxiety as to the permanence of the supply led us to observe the depth of the water at intervals of about ten days. It soon became evident that the water was receding. In 1886 there was a gratifying rise of the surface and a total gain of 12 feet. Our curiosity was aroused, and we determined to study the law, if such a law existed, of this ebb and flow. These observations have been continued during the past seven years. We found that in normal years the surface of the water reaches its lowest level in December, rises until June, and descends during the autumn.

An examination of the amount of the rainfall shows that while the amount of rainfall was as great or greater during the last half of the year as during the first, the level of the water in the well continually lowered. Atmospheric temperature had practically no effect, as the temperature of the water in the well is practically constant all the year round. The depth of the well prevented evaporation from its surface from having any effect.

The author believes that the true cause is the result of the influence of gravity and of the sun's attraction at different seasons of the year. When the sun reaches its furthest point south of the equator, gravity exerts its maximum influence on the waters of the northern hemisphere. The waters of the earth will be drawn into the minutest crevices and the surfaces lowered, but in June they will, in a measure, be released, and, under the influence of adhesion and friction, will be held at a higher level than during any other season of the year.

Data obtained from the government records, showing the depth of water in the great lakes, show that there is a similar rise and fall, the range of yearly ebb and flow being from 12 to 15 inches in our northern lakes. So far as we are aware, no data exist for the small lakes. More extended research will, we believe, secure as complete a recognition of yearly tides as physical geography has always accorded to the phenomenon of daily tides.

The author presented two diagrams, one of which showed the rise and fall of the water in the well, covering a period of seven years, and also the northing and southing of the sun for the same period.

NOTICE TO MARINERS.

Long Point Fog Alarm.

A fog horn operated by steam and compressed air, established by the Government of Canada, at Long Point, East End, Light Station, on Lake Erie, will be put in operation on the 1st May next. Lat. N., 42° 33'. Long. W., 80° 9' 10". The horn will sound blasts of 7 seconds duration, with intervals of 30 seconds. The fog alarm building is situated about 200 yards south of the lighthouse, and about 400 yards from the shore. It is of wood painted white. The horn is elevated about 20 feet above the ordinary level of the lake, and faces towards the south east.

Georgian Bay Pilot and Charts.

Notice is hereby given that the following Admiralty Charts of the Georgian Bay and North Channel of Lake Huron, made from surveys by Staff Commander J. G. Boulton, R. N., and issued by the Department of Marine, can be purchased from the Chart Agent, Charles Potter, 31 King street east, Toronto. 906. Entrance to Georgian Bay, etc. 907. Georgian Bay to Clapperton Island. 908. Clapperton Island to Mildram Bay. 909. Mildram Bay to St. Joseph Island. 910. Clapperton Channel. 1507. St. Joseph Channel. 1213. Collins Inlet to McCoy Islands, N. E. coast of Georgian Bay. 1214. Cabot Head to Cape Rich. 1408. Collingwood and approaches. A revised edition of the "Georgian Bay and North Channel Pilot," written in connection with the above charts, will shortly be issued by the Marine Department, from whom, as well as from the Chart Agent at Toronto, it can be obtained. William Smith, Deputy Minister of Marine. Department of Marine, Ottawa, Canada, 22nd April, 1892.

THE OPTICIAN TRADE.

The marine optician industry has hitherto not been prominent among the nautical outfit manufacturers on the Great Lakes. Compasses, patent logs, marine glasses, barometers, telescopes and similar instruments have all been shipped from the east and even a large amount of the most important repair work has found its way off the lakes.

The optician industry is a valuable and prosperous one at all sea ports and is worthy of being established at each of the larger lake ports.

The firm of L. Black & Co., at Detroit, Mich., is probably the oldest established optician house on the lakes, having been in business since 1850, and with L. Beckman of Toledo, O furnish a good share of the lake patronage, and yet, there is a vast deal more business which ought to reach the hands of domestic firms.

There will, as a matter of business, always be an opening for competition on the lines of these special manufactures, and more or less importing will be done for many years, but, the future ought not to be lost sight of, and the aim should be to provide the home market with as good a production, at least, as the imported articles, and at the same relative cost.

A SEARCH LIGHT MARVEL.

One of the marvels of the recent electrical exposition at Frankfurt was a six-foot electric search light of 20,000 candle power. Schuckert, the Nuremberg electrician, astonished Europe in its construction. Schuckert is now at work on a larger light for the World's Fair. It will be seven and one-half feet, and of at least 25,000 candle power. The Frankfurt light could be seen plainly at Bingen on the Rhine, forty-five miles away. It is expected that the search light at the World's Fair can be seen at least sixty miles away. Electrical Engineer Sargent is making plans for a tower 300 feet high, on which the big light will be mounted. At a height of 100 feet above the ground will be two six-foot search lights, and the three will suffice to illuminate the skies for miles around Jackson park. Brilliant feats are accomplished with these search lights. Sheets of light can be projected with parallel, converging or diverging rays. When the rays are thrown out parallel a clearly defined sheet of flames seems to be suspended in the darkness. By changing the reflector the rays are brought to a focus at long distance from the central station. These lights, turned on the buildings and alternately shot into the heavens, or out across the lake, will produce brilliant electrical effects.

MARINE ELECTRICAL EQUIPMENT.

One of the most striking advances made in the general equipment of lake steamers is that of the electrical systems now placed on even the ordinary freight steamers.

The coast and ocean service for these devices are usually limited to passenger boats and special tonnage, but the general lake steamer, and more especially all of the recently built steamers are fitted, or being fitted, with complete systems of electrical lighting plants.

As an indication of the perfection to which this special industry has reached on the great lakes, we may point out the complete installation of the electric light plant on the steam yacht Grace, owned by Mr. M. B. Mills, of Detroit, Mich. In this instance, the entire plant, including storage battery, dynamo, engine and accessories, has simply added to the yacht's weight about 1,400 pounds. The room consumed was but 2 feet long by 1½ wide, and 3 feet high. The dynamo and engine are placed directly over the boiler, which is a horizontal tubular, and rests directly under a very handsome plate glass cover made especially for the purpose, and this portion of the equipment hitherto hidden, has been transformed into a perfect little engine-room, and has created considerable comment both from the owner and his many friends, as well as the marine public. The capacity of the plant is 35, 16, C. P. lamps, but there are only 20 being used, and the remainder of the current will be used for ventilating purposes. The yacht is elegantly furnished and the cabins finished in ivory and gold tints. One of the principal pleasures Mr. Mills, owner of the yacht, expects from his electric lights, is that his decorations will not be spoiled in any way, as would be the case if he were using oil lamps. Aside from the owners' views it is gratifying that such perfection in the electric system is attainable. The Electrical Equipment Co., Detroit, Mich., who are contractors for the equipment of all manner of electrical appliances furnished this handsome outfit.

AN INTERESTING BOTTLE PAPER.

On Sept. 1st, 1887, a bottle paper was set adrift off Paddock's Island, Hull, Mass., by Mr. Charles McLean. It drifted out with the ebb tide and was next heard from on February 28th, 1892, when it was picked up on the beach near San Fernando, Spain. Fortunately this interesting paper reached the captain of the port, who forwarded it to the U. S. Consul at Cadiz, and the State Department turned it over to the U. S. Hydrographic Office, where it has been added to the large collection of such papers now on hand. The Great Circle distance from port to port is 2,975 miles, but the distance actually traversed is probably as great as 4,000 miles, and it may even have made the entire circuit of the Atlantic.

This report is of especial interest because it gives an authentic instance of a drift from continent to continent, and not merely from some position at sea to some distant coast, and to insure the widest and best circulation is embodied in the North Atlantic Pilot Chart for May, 1892.

INLAND LLOYDS SUPPLEMENT.

Supplement No. 1 for May to the Inland Lloyds Vessel Register has just been issued by Manager McLeod. It is quite extensive, as it was deemed best not to delay the publication of the Register for 1892 until certain important data could be secured. The supplement enrolls the names of seven new steel and one new wooden steamer, and one new barge, as follows: Andaste, Cleveland Ship Building Co., \$150,000; J. B. Colgate, Samuel Mather, and Thomas Wilson, American Steel Barge Co., \$150,000 each; Mariposa, \$225,000, and Samuel Mitchell \$190,000, from the Globe Iron Works Co.; Pioneer, Detroit Dry Dock Co.; Uganda, \$130,000, and barge John C. Fitzpatrick \$70,000, built by the F. W. Wheeler Co., of Bay City, Mich. The other entries mark re-surveys, change of ownership, or corrections.

LAUNCH OF A WHALEBACK.

The steel steamship, Thomas Wilson, was successfully launched on Saturday afternoon from the Superior Yard of the Steel Barge Co. in the presence of a large crowd. The Wilson is the largest vessel ever completed by the company, though four others of the same size are on the stocks for an early launch.

The Wilson is 320 feet in length, and will carry about 4,000 tons. She loads her first cargo of wheat for Buffalo next week and there is much curiosity among lake vesselmen to see what she can carry on the small draught now allowed through the Sault canal.

A NEAT craft was launched April 29th., from the yards of the Detroit Boat Works. She has been named the Visitor, and will ply between Put-in-Bay and Middle Bass Island. She is intended to accommodate Detroit excursionists on the Frank E. Kirby. She is of steel throughout, 95 feet long, 19 feet beam, and 8 feet deep, and will accommodate 200 passengers. The Detroit Boat Works have already established an enviable reputation for building this class of tonnage, and the Vision has added to their well known laurels, as she is a handsome well-built speedy craft.

Notes.

CAPT. A. B. DAVIS, of the revenue cutter Andrew Johnson in winter quarters at Milwaukee, has received orders from Washington to ship his crew and put the cutter in commission on May 15. First Lieut. J. B. Butt has been ordered to the Andy.

At the meeting of the National Geographic Society, Washington, D. C., held on Friday last, Lieut. S. W. B. Diehl, U. S. N., read a paper on "The compensation of the compass on Board Iron Ships," and Prof. Cleveland Abbe, chief meteorologist of the Weather Bureau, on "Various Theories of Terrestrial Magnetism."

THAT is a magnificent commerce and the outlet of a magnificent country, says the Buffalo Courier, which opens the season of navigation with the sailing of a fleet of a hundred great steamers freighted with 6,000,000 bushels of grain, worth not less than \$4,000,000. Such was the first week's opening of the lake commerce between Chicago and Buffalo. It is a commerce that the world cannot match and never has matched.

THE break in the lock at St. Mary's Falls Canal last Tuesday delayed over thirty up-bound steamers and sailing vessels from ten to twenty hours. The canal is positively the key to Lake Superior commerce, and every care is being taken by the U. S. officials in charge to meet any accident to the locks in a prompt and successful manner. The repair to the recent break speaks highly for the resources and skill of those in charge.

THE United States courts have held that a vessel cannot be held for injury to cables in navigable waterways. A short time ago an ocean-going steamship, in leaving her dock at Jersey City, plowed up the soft bottom with her propeller, which, on coming in contact with a dozen or more sub-marine cables, tore them asunder. A decision in a suit at law that followed was in favor of the vessel, on the ground that a harbor is to kept free for navigation.

CAPT. BROOKS, who owns the tug Niagara, says that his Roberts boiler has been used in her constantly for the past eighteen months, at a pressure of 150 lbs., without one hour's delay on account of the boiler. He also says he has run the boiler four months at one time without changing the water except to use the bottom blow cocks slightly once or twice a day. He says it is the most economical boiler he has ever seen during a steamboat experience of 40 years. There are several tugs of the same name, but this is the one formerly owned by the Standard Oil Co.

THE Composite & Steel Shipbuilding yards of the Detroit Dry Dock Co., at Wyandotte, Mich., is pronounced by the well-known expert, Mr. Joseph R. Oldham, as being one of the most complete in modern machinery, facilities, location and system for carrying out first-class work of any in the world. Mr. Oldham is a practical ship-builder, has worked in and visited every shipyard of any pretensions in the world, and his unqualified praise of the excellent plant at Wyandotte is well advised and merited.

A DEEP sea diver gave an exhibition in Melbourne recently of a model, 3 feet 6 inches long, intended to show how sunken ships may be raised by means of a cofferdam built up from the main deck and then pumped out. The model was sunk with the cofferdam erected on it, and was then emptied of water by syphons, whereupon the model rose. The cofferdam on Mr. Beckett's principle could be built, it is claimed, even if the vessel's main deck was gone, by clip bolts catching them underneath. Those who witnessed the experiments were favorably impressed, and experts consider the plan feasible.

As indicating the magnitude and intricacy of the huge sailing ships now in vogue, and the extent to which the "unbought wind" is taken advantage of, even in this age of steam, the following general particulars respecting the Marie Rickmers, supplied by Messrs. Russell & Co., the builders of the vessel, will doubtless be of interest. The total sail area of the Marie is 56,800 square feet, the aggregate length of sparring fitted to suspend and spread the same being 2,000 lineal feet. The combined height of her five masts is 960 feet; the total length of steel wire in the form of shrouds, stays and spars is 21,300 lineal feet, or over four statute miles; and the total length of running cordage is no less than 31,000 lineal feet, or approaching six miles.

THE "Army and Navy Journal", in speaking of the recent court-martial held at Cleveland, says that: "Another court-martial for Major Lewis C. Overman, Engrs., is now certain. It was anticipated by some of the War Department authorities that when the second set of charges was laid before him he would resign. But Major Overman denies every charge, and, in a letter received at the Department on Thursday last, says that he stands ready to meet his accusers. The new charges, which were preferred by General Casey, are based upon alleged transactions similar to those specified in the former charges. It is claimed that one voucher has been raised from \$1.50 to \$31.50, and that others are straw vouchers—that is, vouchers made out in the names of persons who do not exist."

THE new ferry steamer Promise, recently launched from the Springwells shipyards of the Detroit Dry Dock Co., is now being fitted out. She has a government license for 1,500 passengers, but can probably carry 2,000 comfortably. She was constructed with a view to plowing through the thickest

ice, having the peculiar bow of boats of that class and plenty of power. The company will of course use her in the fall of the year for wrecking purposes should opportunity offer, and she will make a first class boat for that work. During the summer months she will be used on the Belle Isle route and for excursion purposes. This steamer was designed by Frank E. Kirby and built under the supervision of Supt. E. T. Peck, of the Springwells Shipyard. She is a first class little steamer in every respect. Her cost is \$50,000.

To an American the sight of men kissing each other is an odd one, yet the practice is common among most of the people of continental Europe. Capt. Sargent, of the steamship Indiana, recently went to Libau, in Russia, with his ship laden with flour for famine sufferers. Of course the Russians were very grateful for the food given by Americans to their countrymen, and they wished to show their appreciation. When Capt. Sargent returned home from his trip he was accosted by a reporter: "What has become of your beard, Captain?" for a long growth of brown whiskers adorned his chin when he sailed. "Well, now, believe me or not, but I have not put a pair of scissors to that beard since I left. What has happened to it? Why, it was kissed away. Talk about your gratitude—the Russians are the people for showing it, I tell you! During the four days we were in Libau, I was hugged, embraced and kissed until my beard actually fell away. Why, the Russians would come up to me, and I would put out my hand to shake with them, but no sicee—that wasn't good enough for them. Plumb into my arms they would come, their arms would go around my neck, and for the next two minutes there was a catch-as-catch-can kissing match."—"Harper's Young People."

FORMATION OF THE LAKE CARRIERS' ASSOCIATION.

One of the largest and most influential organizations of shipping interests has been successfully accomplished on the Great Lakes during the past week. The following well known lake vessel owners attended the meeting on consolidation, and many others were represented by proxy, and others sent in their list of tonnage for assessment:

M. A. Bradley, Capt. Thomas Wilson, W. G. Mather, James Corrigan, H. D. Goulder, H. A. Hawgood and J. C. Gilchrist, Cleveland; C. H. Keep and James J. H. Brown, Buffalo; Capt. John G. Keith, Chicago; W. S. Brainard, Toledo; R. E. Schuck, Sandusky; Capt. E. M. Peck, Aaron A. Parker, D. C. Whitney, Byron Whitaker, Charles Whitaker, Capt. James W. Millen, Cash P. Taylor, Capt. T. C. Hart, L. C. Waldo, H. S. Hodge, William Livingstone, Jr., W. A. Livingstone, John Shaw, Jr., J. W. Westcott, John Hurley, C. H. Westcott, Capt. Richard Cuson, A. G. Lindsay, David Carter and R. T. Gray, Detroit.

Capt. Thomas Wilson of Cleveland was called to preside during the business of organizing the inclusive interests and the election of the following board of managers; F. W. Baldwin, Ogdensburg, N. Y.; T. R. Morley, Marine City, Mich.; Alvin Neal, Port Huron, Mich.; James Davidson and Charles A. Eddy, Bay City, Mich.; Alex McDougall, Duluth, Minn.; F. W. Gilchrist, Alpena, Mich.; J. C. Gilchrist, Vermillion O.; W. E. Chapman, Sandusky, O.; F. J. Firth, Erie, Pa.; W. S. Brainard, L. S. Sullivan, and A. W. Colton, Toledo; J. L. Higgle, Jesse Spaulding, J. S. Dunham, J. G. Keith and Joseph Austrian, Chicago; David Vance and R. P. Fitzgerald Milwaukee; William Livingstone Jr., James Millen, David Carter, E. M. Peck, H. S. Hodge and D. C. Whitney, Detroit; S. D. Caldwell, E. T. Evans, W. Bullard, W. P. Henry, John Gordon, P. P. Miller, J. J. H. Brown and James Ash, Buffalo; H. M. Hanna, Thomas Wilson, M. A. Bradley, James Corrigan, George P. McKay, H. G. Dalton, H. H. Brown, John W. Moore, B. L. Pennington, H. A. Hawgood and W. C. Richardson, Cleveland.

The officers and committees unanimously elected are as follows: President, M. A. Bradley of Cleveland; vice-presidents J. W. Millen, of Detroit, F. J. Firth of Erie, Thomas Wilson of Cleveland, P. P. Miller of Buffalo, W. S. Brainard of Toledo, J. G. Keith of Chicago, R. P. Fitzgerald of Milwaukee and Alex. McDougall of Duluth; Secretary Charles H. Keep, of Buffalo; Treasurer, George P. McKay of Cleveland; counsel, Harvey D. Goulder of Cleveland.

FINANCE—H. M. Hanna, chairman, Harvey H. Brown, James Corrigan, H. A. Hawgood, Thomas Wilson, and M. A. Bradley of Cleveland; J. C. Gilchrist, of Vermillion; E. M. Peck and D. C. Whitney of Detroit; W. P. Henry and J. H. Brown of Buffalo; David Vance and R. P. Fitzgerald of Milwaukee; J. G. Keith and J. S. Dunham of Chicago.

LEGISLATION.—S. D. Caldwell, chairman, James Ash, P. P. Miller, E. T. Evans, W. Bullard and John Gordon, of Buffalo; T. J. Firth of Erie; H. M. Hanna and James Corrigan of Cleveland; William Livingstone Jr. and James Millen of Detroit; Jesse Spaulding of Chicago; Charles A. Eddy of Bay City; Alex McDougall of Duluth; W. S. Brainard of Toledo.

AIDS TO NAVIGATION.—H. G. Dalton, George P. McKay, B. L. Pennington, W. C. Richardson, Thomas Wilson and John W. Moore of Cleveland; H. S. Hodge and David Carter of Detroit; Joseph Austrian of Chicago; F. W. Baldwin of Ogdensburg; A. W. Colton of Toledo; E. T. Evans and W. Bullard of Buffalo; Alvin Neal of Port Huron; James Davidson of Bay City.

THE TRAFFIC RECORD OF THE GREAT LAKES.

The Hon. Robert P. Porter, superintendent of the eleventh census, addressed an influential audience in Cleveland, last week. A volume of statistical matter shows that Cleveland occupies the proud position of standing first on the list of shipbuilding cities in the United States, and second only to the Clyde in Scotland, the most extensive shipbuilding location in the world.

The new tonnage constructed in 1890 in the United States aggregated 294,122 tons, of which 108,525 tons were built for the great lakes. Of this amount Cleveland is credited with 39,095 tons, being 13 per cent. of the aggregate tonnage, and 36 per cent. of the entire tonnage of the great lakes.

For the two years 1889-90 the tonnage of the three principal shipbuilding cities is given as follows: Cleveland, 71,322 tons; Philadelphia, Pa., 53,811; Bath, Me., 49,830. The excess of Cleveland over Philadelphia was 17,511 tons, and over Bath 21,492 tons.

The traffic record of freight in tons entered and cleared at the four largest points is as follows: Chicago, 7,984,038; Buffalo, 6,730,137; Escanaba, 3,626,590, and Cleveland, 3,621,570 tons.

In a general account of the lakes the following figures are given for 1889: 2,784 registered vessels; gross tonnage, 926,355; value, \$48,941,474; estimated number of hands employed as crews, 15,881; wages paid, \$5,322,799.

The figures for 1889 have been augmented, but up to that date the statistics relating to number, tonnage, value, etc., of all classes of ships and craft registered in all parts of the United States have been completed, and the work has proved most satisfactory. The total number of vessels aggregates 25,540, the gross tonnage, 7,633,676, and the value \$215,069,296. The total freight movement aggregated in the census year 172,110,428 tons. There were employed no less than 106,436 persons, and the wages paid out for the year reached \$6,867,305. For the first time these facts have been fully gathered by the national census, and for the first time we can point with infinite pride to the vast importance of our coastwise and river and lake trade, and demand of our national legislators lengthened canals, deepened channels, and improved harbors.

OBITUARY NOTICES.

CAPT. W. C. ROBERTS.

William C. Roberts, the proprietor of Roberts Landing and well-known manufacturer and vessel man, died at his home at Roberts Landing, Marine City, Mich., on Wednesday, April 27th, 1892, after a brief illness of heart failure. His death was sudden and unexpected and was a heavy blow upon his family and friends.

William C. Roberts was born in Connecticut, October 8th, 1840, was fifty-two years old. He was a brother of W. S. Roberts, also of Marine City. In 1841 his parents removed to Cleveland and the following year settled at Roberts Landing. There William C. spent his early boyhood. At the age of sixteen he began sailing with his father and afterwards sailed as master of different vessels until 1867, when he and his brother Walter established their manufacturing business of ax helms and other useful articles at the Landing. He was also interested in vessel property, being secretary of the Marine Transit Co., organized by capitalists of Marine City only a few years ago, but owning several fine vessels. Mr. Roberts had held many positions of trust and was a man noted for his sterling worth and integrity of character. In 1874 he was married to Miss Cassie Harrow, of Algonac, and a widow and five children are left to mourn his loss.

CAPT. WILLIAM WEIR.

The remains of Capt. William Weir, who died at New York on Monday, April 25th, 1892, were brought to Marine City for burial. Capt. Weir is well-known by the older residents of Marine City. He was sixty-nine years old and had sailed as master of a vessel for fifty years upon the lakes and oceans. Capt. Weir was a half brother of A. T. Young, of East China, a cousin of Dr. R. B. and William Baird and a brother-in-law, of A. G. Westbrook, of this city.—Marine City Reporter.

A LAKE MICHIGAN ROUTE.

The steamer City of Milwaukee has commenced to make her regular trips from Milwaukee to Grand Haven and with the propeller Wisconsin form a night line across Lake Michigan, one boat leaving Grand Haven every evening and one leaving Milwaukee, connecting with trains for the east at Grand Haven every morning. The steamer has received a general overhauling the past winter and quite an improvement has been made to her cabins. She has as fine an appearance this spring as the first year she came out and still holds the name of being a popular passenger boat on Lake Michigan. She is officered as follows: G. F. Smallman, master; John Smith, mate; Dan Long, 2nd mate; C. L. Barron, chief engineer; E. Scott, 2nd engineer; W. Stewart, clerk, and E. Nolan, steward. The steamer carries a crew of forty all told.

DURING the recent trip of a German balloon over Russian Poland, the Prefect of Police at Warsaw posted notices admonishing the people not to mistake the planet Venus for an electric search light borne by the balloon.

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CLEVELAND, O., MAY 5, 1892.

VESSEL OWNERS from all lake ports would do well to communicate with congressmen representing their districts, and request their hearty support in favor of the sundry light-house bills now before the House. The bill has passed the Senate, and will be acted on in the House for embodying in the sundry appropriation act.

If precipitation alone rules the level of the lakes, and there can be but little doubt that such is the case. There must have been considerable less of it this year than last as the large tonnage of the lakes is knocked out of about 15 per cent of last year's carrying capacity on account of shoal water. The smaller tonnage are of course satisfied, but the three to four thousand ton carriers consider themselves in a hole and long for better water.

SENATOR CALVIN S. BRICE, of Ohio, has been indefatigable in his efforts to secure the aids to navigation petitioned for by the Vessel Owners and Lake Carriers' Associations. Even in the event of the aids to lake navigation asked for in the River and Harbor bill falling through, the separate bills introduced in the Senate by Brice, and in the House by Cockran and Taylor, are sure of favorable action, but this even will not help out the private light expenditure for this year.

THE standing of an old-established technical paper, and the wide-reaching influences which its years of publication invariably command, is well exemplified by the receipt in one mail this week, of prepaid annual subscriptions to THE MARINE RECORD from Norfolk, Virginia and Kingston, Idaho. We thank our marine friends from the Atlantic to the Pacific Coasts for their staunch adherence to the RECORD, assuring them that our best efforts will always be turned to a dissemination of the news which is allied with their best interests, and that of the future maritime supremacy of the United States.

THE United States steamer Michigan is under orders to proceed to Lake Michigan and survey the lake front in the vicinity of Chicago over an area of thirty miles east and west and ten miles off shore. This order has been promulgated on account of the World's Fair, yet, nevertheless, the ten mile limit for the entire chain of lakes has been advocated by the Corps of Engineers, U. S. A. in charge of lake districts, and if the World's Fair gives us a thirty mile survey, we are profoundly thankful for even so limited a slice of ground being surveyed so as to obtain a modern delineation of the bottom as opposed to the obsolete charted diagrams now issued by the United States Government.

AGAIN the cry has been sent from end to end of the lakes, "Lost with all hands," this time in connection with the Canadian schooner Glenora on Lake Superior, which vessel broke away from her tow in last Thursday's southwest gale. It was widely heralded that the crew of ten persons were certainly all lost with the vessel, but, we are happy to say that although severe privations and hardships were undergone all hands are still alive to "tell the tale." It would be difficult to point out a more reprehensible practice than this one now so ordinarily in use on the lakes of placing the worst possible construction on a casualty. There are many locations on the north shore of Lake Superior where a vessel might lay for a few days, all well, but not in reach of telegraphic connection, and the horrible fiction of total loss with all hands ought not to be allowed in published reports until some tangible grounds for the assumption were forthcoming. The wives and families, as well as relatives and friends of the crew of the Glenora have likely suffered untold grief during the past few days on account of the garbled statements of a know all surmiser of the loss of the vessel with all hands, and the best newspapers of the lakes have lent their columns to a furtherance of "the

wind." Surely the present generation may be satisfied with the news of a casualty promptly after it occurs, without needlessly anticipating the loss of men, the nature of whose calling leaves ground for many hairbreadth escapes from an untimely end. It is wrong to base positive assertions on mere rumor and the loss of seamen, especially needs no premature announcements.

WELLAND CANAL TOLLS.

Considerable feeling is being evidenced in the matter of tolls on the Welland Canal cargoes of western grain and retaliatory measures are generally endorsed.

Grain must necessarily be transhipped at a terminal point on Lake Ontario. The Canadians offer Kingston facilities, which are found to be totally inadequate to handle the volume of business. Americans desire Ogdensburg for a terminal port, where there are elevators and other facilities far in advance of what Kingston offers. If the grain is transhipped at Kingston, a rebate of 18 cents per ton off the 20 cent. rate is allowed, but if at Ogdensburg, the full rate of toll is collectable.

The Dominion Government is no doubt acting advisedly in this matter, but, to the general shipper it looks very much like unjust discrimination, especially when the United States places the St. Clair and St. Mary's Falls canals at the service of Canadian tonnage free of tolls.

Towing and wrecking privileges have just been amicably adjusted between the two countries, and less restriction on the Welland Canal traffic would probably have a tendency to stop the present friction in shipping circles.

The Dominion may feel that the recent stringent measures taken against Canadian labor on United States vessels and the prohibitory clauses of our coasting laws are discriminatory features on the side of the United States. Yet, however this may be, a narrow, carping spirit of national retaliation ought not to be allowed to gain ground on either side, but, rather an appreciative order of concessions and modifications should mark the rulings of both powers in this question of canal courtesies.

To those shippers who advocate high-handed demands on the Canadian Government toward abrogating the canal tolls entirely, and others who are brimful of the spirit of retaliation in measure, we would say a little circumspection is, perhaps, necessary, as we find that to enter or leave Lake Erie at either end, the Dominion Government are masters of the situation, and the same is equally true of Lake Ontario, the St. Lawrence system of canals forming the eastern bar and the mouth of Detroit River the western bar, at the same time, there is no sense of international comity in Canada foisting upon United States commerce the entire cost of construction and keep up of the Welland Canal. Rather will grain be diverted to New England points, and the Montreal shipments steadily decline until the splendidly constructed waterway finally falls into disuse.

RULE OF THE ROAD.

The maritime law case printed in our columns this week fully bear out the views which we have consistently advocated regarding the liability of clashing between the rules of the board of supervising inspectors and the acts of Congress, or in other words, between what is considered in admiralty courts as local laws and the United States statutes. Judges Wallace and Lacombe, of the Circuit Court of Appeals, second circuit, uphold the views of THE MARINE RECORD in their recent decision.

Rule 1 prescribes that the answering steamer "shall answer promptly by a similar blast of the steam whistle." The learned judges take occasion to state that if this means that she must give a response indicating that she will conform her movements to the proposed course of the other, they think the rule transcends the authority of the supervising inspectors, as the inspectors cannot lawfully require the other steamer to assent to a departure from the statute in cases covered by the rules of navigation as enacted by Congress, and the inspectors' rules are not to be construed as meaning to do so.

Steam vessels meeting head on, or nearly so, must pass to the right, and when crossing so as to involve risk of collision, the vessel which has the other on her own starboard side must keep out of the way, and the other must keep her course, subject only to the qualifying clause, the rules are obligatory, according to act of congress. Now, whatever else is done, is entirely outside the national rules of navigation, rules of the inspectors to the contrary notwithstanding.

It is not our intention to criticize the inspectors' rules of the road, at this time, further than to say that there ought not to be so wide a margin for adverse ruling in courts of admiralty. It would also be well for our readers engaged in the active commerce of the lakes, as masters and officers, to bear in mind that the statute law will at all times over-ride the rules of the board of supervising inspectors, and we have taken occasion to point out in

the past wherein they may be set aside in one or two particulars.

There is no point in seamanship involving greater risk to life and property than the "rule of the road," and there ought not to be a single conflicting opinion in the laws, yet, as it now appears, those who thought they knew their way over the ground, may throw up their hands in disgust, while they whistle and toot, proceed with caution, and allow nothing to come within hailing distance until the Board of Supervising Inspectors and the U. S. statutes agree to coincide.

Safety does not always lay on the side of the steamer giving the first signal, nor will a cross signal be tolerated, and should a casualty occur during an infringement of a United States statute law the offender may expect the full measure of retribution to follow in his path; therefore, on international waterways, there ought to be but one system of laws regarding the "rules of the road," so that when two vessels came together, the cause might be distinctly and positively assigned, and not as it is now, bandied about between whistles, rules of the board of supervising inspectors, and the United States statute laws on the navigation of vessels meeting and crossing.

In this connection, we again invite the attention of the supervising inspectors and the sailing community to the illustration of the extracts from the revised statutes, as given in the 4th, 5th, 6th and 7th diagrams, intended to show the system of colored lights, and for use by pilots in the rules of the road, and we venture to say that in any danger of collision no sensible seaman would act as therein authorized. If there was no danger of collision in these several diagrams of position, then the rules, as rules, are valueless, and they are so pronounced, in any case by the rulings of circuit judges Wallace and Lacombe.

There should be no position in which two or more vessels could possibly be placed, but that the "rules of the road" would apply, and if we take the sixth diagram, A, could not port with safety as recommended and authorized to do, if another vessel was on his starboard side, so that evidently there would be some other way for the navigator to avoid collision. In a word, the law ought to rule that he should simply keep clear and not iron him down to only one way out of the difficulty. Similar action would also be advisable in the other instances for the giving way vessel.

GOVERNMENT BREAKWATERS IN CHICAGO HARBOR.

It now appears that the United States has no title to the submerged land on which the exterior sea wall and breakwaters are built at Chicago. The early Engineers in charge of government works neglected to obtain the titles to this land from the State of Illinois when the improvements were first begun, and the whole question, important as it is, has never been attended to. It is now reported that the Engineer in charge will ask the Illinois legislature at its next session to cede the land to the United States Government upon which all the harbor works have been constructed up to the present time.

On account of this former irregularity or oversight, it has been widely stated that the authority of the United States to protect these works from occupation, pillage, or appropriation by individuals is null and void and that squatters rights, as it were, will be stoutly maintained by those now occupying portions of these improvements.

So that the foregoing erroneous opinion or misunderstanding may not gain credence among those people who would be liable to take advantage thereof, and for the edification of the citizens of our lake ports. We quote the following extract from River and Harbor Act approved September 19th, 1890:—

SECTION 8. That all wrecks of vessels and other obstructions to the navigation of any port, roadstead, harbor, or navigable river, or other navigable waters of the United States, which may have been permitted by the owners thereof or the parties by whom they were caused to remain to the injury of commerce and navigation for a longer period than two months, shall be subject to be broken up and removed by the Secretary of War, without liability for any damage to the owners of the same.

SEC. 9. That it shall not be lawful for any person or persons to take possession of or make use for any exclusive purpose, or build upon, alter, deface, destroy, injure, obstruct, or in any other manner impair the usefulness of any sea-wall, bulk-head, jetty, dike, levee, wharf, pier, or other work built by the United States in whole or in part, for the preservation and improvement of any of its navigable waters, or to prevent floods, or as boundary marks, tide gauges, surveying-stations, buoys, or other established marks, nor remove for ballast or other purposes any stone or other material composing such works.

SEC. 10. That the creation of any obstruction, not affirmatively authorized by law, to the navigable capacity of any waters, in respect of which the United States has jurisdiction, is hereby prohibited. The continuance of any such obstruction, except bridges, piers, docks and wharves, and similar structures erected for business purposes, whether heretofore or hereafter created, shall constitute an offense, and each week's continuance of any such obstruction shall be deemed a separate offense. Every person and every corporation which shall be guilty of creating or continuing any such unlawful obstruction in this act mentioned, or who shall violate the provisions

of the last four preceding sections of this act, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding five thousand dollars, or by imprisonment (in the case of a natural person) not exceeding one year, or by both such punishments, in the discretion of the court, the creating or continuing of any unlawful obstruction in this act mentioned may be prevented and such obstruction may be caused to be removed by the injunction of any circuit court exercising jurisdiction in any district in which such obstruction may be threatened or may exist; and proper proceedings in equity to this end may be instituted under the direction of the Attorney-General of the United States.

SEC. 11. That it shall be the duty of officers and agents having the supervision, on the part of the United States, of the works in progress for the preservation and improvement of said navigable waters, and, in their absence, of the United States collectors of customs and other revenue officers to enforce the provisions of this act by giving information to the district attorney of the United States for the district in which any violation of any provision of this act shall have been committed: Provided, That the provisions of the act shall not apply to Torch Lake, Houghton County, Mich.

SEC. 12. That section twelve of the river and harbor act of August eleventh, eighteen hundred and eighty-eight, be amended and re-enacted so as to read as follows:

Where it is made manifest to the Secretary of War that the establishment of harbor-lines is essential to the preservation and protection of harbors, he may, and is hereby authorized, to cause such lines to be established, beyond which no piers, wharves, bulkheads or other works shall be extended or deposits made, except under such regulations as may be prescribed from time to time by him; and any person who shall willfully violate the provisions of this section, or any rule or regulation made by the Secretary of War in pursuance of this section, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be punished by a fine not exceeding one thousand dollars, or imprisonment not exceeding one year, at the discretion of the court, for each offense.

It will be seen from the foregoing extracts that no one has a right to locate on, or even temporarily to occupy the works constructed by Federal authority, ownership of State notwithstanding, without rendering themselves liable to prosecution under provisions of sections 9 and 10 of the River and Harbor Act. Further than this, we may say, that where any undue license is taken, a timely and vigorous policy ought to be instituted to oust the intruder from works which are owned jointly by every citizen of the United States and not by the citizens of that State alone in which the improvement has been made.

THE FREIGHT SITUATION.

The freight market has shown, since the last issue of the RECORD, an improvement more marked than the present increase of rates would appear to indicate. The movements of ore to Lake Erie ports has only fairly begun this week with a boat taken yesterday at 75 cents from Escanaba, and quite a little inquiry for capacity on the part of ore men and grain shippers; there are indications that the Escanaba rate will reach the 80 cent mark before many days.

The grain rates at Duluth are 3½ cents, and likely to go higher, but weakened materially at Chicago yesterday, the managers of the Line boats being interested in not allowing rates from that port to get so high as to attract tonnage from the ore trade.

The lumber rate to Chicago has advanced 12½ cents from all ports, and the rates to Lake Erie ports are also stronger. Coal charters for loading at Cleveland have been very few this week on account of the coal shovelers' strike, and several boats which had been chartered for coal cancelled their charters and cleared light. Little chartering for hard coal is being done, and there appears to be some justification for the charges that the new Reading Syndicate is limiting the shipments, although this is said to be a generally beneficial course for both consumers and the trade at this time. The Lake Michigan soft coal rate was restored to 50 cents this week.

THE energetic and well-advised steps now being taken by the Weather Bureau to ascertain the physical geography of the Great Lakes is a most commendable feature from every standpoint. It is possible that the fogs characteristic of Lake Superior, may be so clearly outlined, that vessels, by shaping a course, may steam along on the edge of these fogs and in comparatively clear weather, the prevailing winds for each month and local characteristics, besides the set and drift of that insidious enemy to the careful navigator—unknown currents, will no doubt be carefully ascertained. The past week has just furnished an object lesson in this particular by the grounding of a large valuable steel steamer, having probably drifted in the intervals during which she was slowed down in a fog, several miles out of her course.

THE census bulletin on transportation by water, credits the lakes with 2,784 vessels with a crew total of nearly 16,000 men. This estimate allows of less than six men to each vessel, a ridiculously low figure when it is considered that the Chicago lumber vessels always carry seven men, perhaps this minimizing feature may be augmented later.

THE re-organization of the Lake Carriers' Associations as resulted in a perfect system being devised for systematic work at all lake ports.

TO DETERMINE LAKE CURRENTS.

The U. S. Weather Bureau, Department of Agriculture, have shipped to Cleveland, Ohio, a large number of strongly made amber colored glass bottles to be used in distributing over the Great Lakes to ascertain the drift, and ultimately the set of currents.

This large expanse of fresh water, covering as it does an area equal to several States, has hitherto been severely neglected in so far as its physical geography, phenomena and characteristics are concerned, until it is now found that the system of weather forecasts for the States bordering on the Great Lakes would be greatly facilitated by a knowledge of temperatures of both air and water, and prognostications might, in a measure, be tested and verified by authentic reports of the velocity and direction of the periodic, variable and destructive winds, fog belts, and currents over the various sections of the lakes.

Mark W. Harrington, the present chief of the Weather Bureau, being thoroughly conversant with the Lake region through his long residence in Michigan, no sooner had hold of the reins of the bureau management than he took such steps as were necessary to furnish the country with an enhanced service, and in the past six months has developed the most systematic and reliable weather forecasts of any nation in the world. So that the Great Lakes might receive a due share of attention, an experienced marine agent and meteorologist was appointed to this special work, and many men engaged in the sailing interest has been asked to co operate as voluntary observers on the lakes during the season of navigation.

The systematic distribution of these bottle papers has been provided for by dividing the lakes into fifteen mile and squares. Small charts with each square numbered will be handed to the observers with instructions where to throw the bottles overboard and at what times. The bottles have been made according to special instructions and after repeated tests to float at an angle of about 70° and to lay submerged within half an inch of the cork, so that they will offer the least possible resistance to surface winds, although the prevailing winds are to be taken into account when verifying the set and drift of recovered bottles.

It is further thought advisable to allow the spring gales to subside before floating these bottles and give the widest distribution possible during the light weather in the summer months. As this portion of the work will be entirely in the hands of the masters and officers, and as the knowledge of prevailing currents will be of inestimable benefit to them in shaping their courses, a hearty co-operation in this work is asked from the lake navigators. Those who desire to participate in the distribution will be supplied with an outfit by addressing the Chief of the Weather Bureau, Washington, D. C., or Dr. H. J. Penrod, Marine Agent, Cleveland, O.

ORE FREIGHT RATES.

The following table shows the monthly rates on ore from Escanaba, Mich., and Lake Superior points to Lake Erie points during the season of 1891:

	Escanaba.	Marquette.	Ashland.
Opened at.....	\$.70		
May.....	.55 to .70	.80	.90
June.....	.55 to .65	.80 to 90	.90
July.....	.65 to .85	.90 to 1.05	.90 to 1.10
August.....	.90 to 1.10	1.05 to 1.25	1.15 to 1.20
September.....	.90 to 1.05	1.05 to 1.20	1.15 to 1.40
October.....	.70 to .95	.80 to 1.15	.95 to 1.40
November.....	.90 to 1.35	1.25	1.40 to 1.50

In 1890, highest rate from Escanaba, \$1.15; lowest, 85c; average, 92c. Highest rate from Marquette, \$1.25; lowest, \$1.00; average, \$1.07. Highest rate from Ashland, \$1.35; lowest, \$1.00; average, \$1.17.

In 1889, highest rate from Escanaba, \$1.25; lowest, 90c; average, \$1.13. Highest rate from Marquette, \$1.50; lowest, \$1.10; average, \$1.33. Highest rate from Ashland, \$1.90; lowest, \$1.25; average, \$1.53.

NEW TONNAGE.

Official numbers have been assigned to the following lake-built tonnage by the Bureau of Navigation, Treasury Department, Washington, D. C., during the week ending April 30th., 1892.

Sail—Abram Smith, Port Huron, Mich., 354 net tons; Myrtle Camp, Milwaukee, Wis., 36 net tons. Steam—Allie E. Shipman, Marquette, Mich., 20 net tons; Andaste, Marquette, Mich., 1256 net tons; Harvey J. Kendall, Cleveland, O., 264 net tons; Iroquois, Port Huron, Mich., 1470 net tons; Tam O'Shanter, Detroit, Mich., 12 net tons.

FOR SAILORS AND MARINES.

The Regular Army and Navy Union, composed of ex-soldiers, sailors and marines of the civil war, initiated a new garrison in Cleveland on Saturday. The garrison has been appropriately named the Rank and File, No. 77. A committee of five members was also appointed to co-operate with the G. A. R. in Memorial Day exercises. Meetings of the garrison will be held weekly for the muster in of new members, as it is known that several hundred honorably discharged soldiers, sailors and marines reside in the vicinity of Cleveland, and who are only waiting an opportunity to join this patriotic and benevolent association. There are garrisons of the union instituted at Chicago, Milwaukee, Sault Ste. Marie, Mackinac, Detroit, Erie and Buffalo.

CASUALTIES.

A large number of casualties through gales of wind and fogs have occurred on the lakes since our last issue, though happily attended with little loss of life. The rumor that the Canadian schooner Glenora had been lost with all hands, created an undue excitement for several days, though she fetched up on Michipicoten Island with the crew all safe. The same anxiety existed about the schooner Sophia Minch and she also has been accounted for all well. The schooner Luff run ashore in a leaky condition on Beckwith Island, Georgian Bay, was afterwards got into Collingwood, where after undergoing temporary repairs she reloaded her cargo and on starting out again was found to be leaking so that more extensive repairs are necessary.

During the dense fog prevailing on the lakes from Sunday night till Monday, the steamer S. Neff ran ashore at Forest Bay near Sand Beach, the life saving crew assisted in jettisoning cargo and she was released without damage. The Canadian steamer Celtic and the Buffalo steamer Russia collided in a dense fog on Sunday night off Rondeau, the Celtic foundered with the loss of one life, the cook named Margaret Strahan, the Russia was also beached leaking badly, about a mile east of the lighthouse.

The schooners Iron State, Annie Sherwood and the Fannie Neal, the two latter consorts of the White Friant and the Edward Kelley, consort of the Marquette, also the Plymouth in tow of the Arizona all suffered more or less damage during last Thursday's gales on Lake Superior. The tug J. H. Clark and barges Sweepstakes and Lone Star drove ashore near Thompson's Harbor in the gale of the 27th, and although a big sea was running the fleet were released without damage.

The schooner Snowdrop fetched up on the rocks off Milwaukee North Point on Monday, and she will probably become a total loss, although a portion of her cargo of cedar posts may be saved, the crew were all saved and the loss amounts to not more than \$5,000.

FLOTSAM JETSAM AND LAGAN.

James C. Balger, of Chicago, has purchased the schooner H. C. Winslow.

The schooner Sigel arrived at Sturgeon Bay on Tuesday, having been nineteen days making the trip from Cleveland.

Capt. Oliver Piland died on Tuesday night at Two Rivers, Mich., aged 50 years. He had been keeper of the life-saving station there for fifteen years.

The first steamship of the Canadian Pacific Steamship Line will leave Owen Sound on Saturday next for Sault Ste. Marie and Fort William. This line comprises the three magnificent steel steamers, Alberta, Athabasca and Manitoba.

Commander Nicol Ludlow, U. S. N., in charge of the ninth lighthouse district, has done commendable work in buoying his district this spring. He has also made notes during his cruise, which are valuable as "notices to mariners."

The Kendall Marine Reporting Co., Port Huron, Mich., have received a full outfit of flags, lanterns, signals, etc., and will hereafter display the storm and weather signals in front of their office. This will be a great convenience to vesselmen and others.

Heavy fogs have hung over the lakes this week from Duluth to Buffalo. At Duluth it was snow and fog, and at Buffalo rain and fog. All varieties of weather prevailed between these points, and some weatherologist ought to tell us something about this weather, "run riot."

The Chicago Board of Marine Underwriters has adopted the following rates on grain cargoes, to go into effect at once: 10 ports on Lake Michigan, 30c; Lake Superior, 50c; Lake Huron, Sarnia and Detroit River, 35c; Georgian Bay and Lake Erie, 40c; Lake Ontario, Ogdensburg and Montreal, 50c per \$100.

Last week's wheat shipments from the head of Lake Superior will foot up about 3,000,000 bushels. On Saturday 10 steamers loaded at Duluth and four at Superior, carrying away respectively 550,000 and 200,000 bushels, making shipments for the day of 750,000 bushels.

At Davidson's shipyard, West Bay City, Mich., the keel was laid for another schooner. She will be 211 feet keel, 35 feet beam and 15 feet depth of hold, and sister ship to the schooner commenced at the yards two weeks ago. She will be completed July 1st, being built for the Davidson Transportation Co.

IN the marine section of the Department of Transportation, arrangements have been made to exhibit, among other things, models of the rig of the old frigate Constitution; of the Victory, the flagship of Nelson; a caravel from Spain, the exact model of the Santa Maria, in which Columbus made his first voyage; canoes of the native traders of the West Indies, hewn from a single tree and propelled by twenty-five paddles. There will be models of such modern racing schooners as the America, Mayflower, Puritan and Volunteer. All sorts of stern-wheel passenger and freight steamers for river navigation, steel-screw ferry boats, electric pinnaces, naphtha launches, etc., will be shown. Then there will appear in their natural order ketches and brigantines, sloops and barks of the Atlantic Coast in 1714 rafts, arks, barges, keel-boats and other craft.

INCORPORATED 1794.

Insurance Company of North America.

CAPITAL, Paid up in Cash, - - - \$3,000,000.00
 ASSETS, - - - - - 9,273,220.00

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WILLIAM A. PLATT, Vice-President.
 GREVILLE E. FRYER, Sec'y & Treas.

JOHN H. ATWOOD, Assistant Secretary.

Lake Marine Department.

GEORGE L. McCURDY, Manager,
 CHICAGO, ILLS.

ORGANIZED 1881.

Michigan Fire and Marine Insurance Co.,

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 ASSETS, - - - - - 900,000
 LOSSES PAID, over - - - 1,500,000

D. WHITNEY, Jr., President.

EUGENE HARBECK, Secretary.

This Company will transact a Hull and Cargo business on the Lakes during
 the season of 1892.

LOSSES PROMPTLY PAID. INSURE IN A STRONG HOME COMPANY. DETROIT, MICH.



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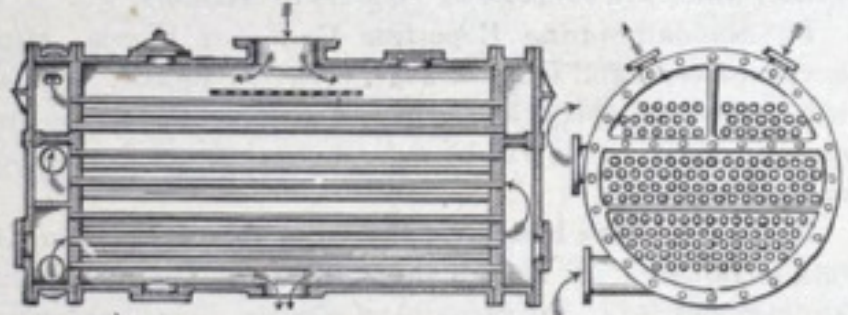
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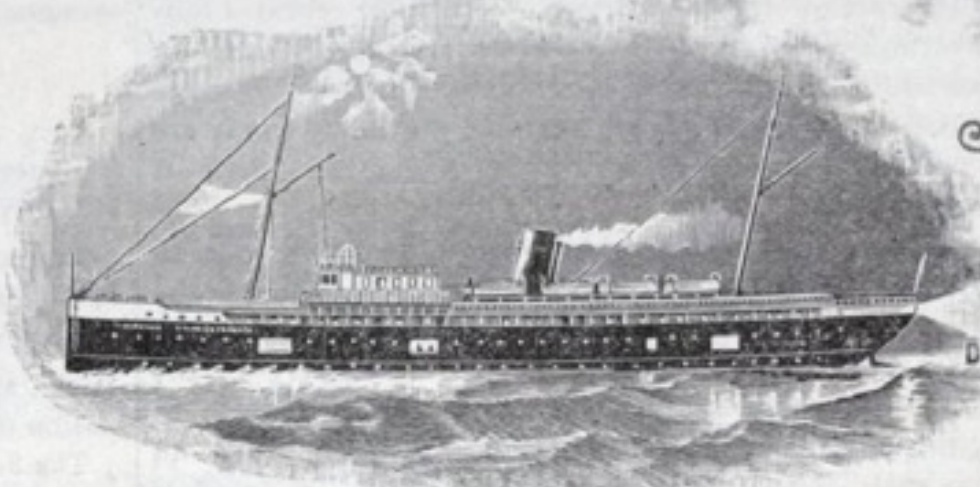
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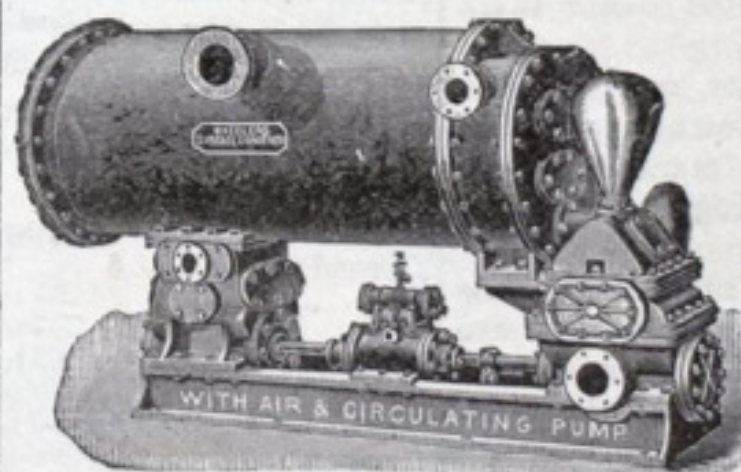
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